Alternative Dispute Resolution of Enforcement Actions at the U.S. Environmental Protection Agency: Is Practice Consistent with the Theory?[1]

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Conflict and crisis are among the few constants at the U.S. Environmental Protection Agency (EPA) since its inception in 1970. Industry's relentless attacks on command-and-control regulations, environmentalists' stiff opposition to any perceived weakening of standards, and widespread public mistrust have plagued the agency. Faced with this growing balkanization among its constituencies, perhaps it was only natural for EPA to be one of the first federal agencies to embrace dispute resolution as a new tool to manage conflict more productively. EPA adopted alternative dispute resolution (ADR) in an early form in 1981, after observing its success in several local controversies during the 1970's.

By 1985, EPA's Office of Enforcement had piloted the use of ADR to assist in the resolution of enforcement actions. In 1987, EPA issued a "Guidance on the Use of Alternative Dispute Resolution in EPA Enforcement Cases" establishing the review of all enforcement actions for the potential use of ADR processes. Now, two decades after initial discussions concerning the use of ADR at the EPA, the agency has a solid track record in applying ADR to a wide range of disputes, especially enforcement actions, and has emerged as the leader among federal agencies. As such, it provides a useful setting for testing conventional wisdom and theories about ADR. This paper compares the findings of an assessment of the EPA's enforcement ADR program, funded by the Hewlett Foundation, with theory found in the ADR literature in four key areas:

- why parties to a dispute choose ADR;
- key elements needed for the successful resolution of environmental conflicts;
- important characteristics of mediators in successfully resolved environmental disputes; and
- whether the number of parties at the table affects the outcome of the mediation.

This research was carried out from 1998 to 2000, utilizing in-depth telephone interviews, government statistics,[2] and archival records.[3] The four groups examined were

[1] The authors thank the staff of the U.S. Environmental Protection Agency, especially David Batson, EPA Senior ADR Specialist, and Lee Scharf, ADR Specialist and Program Coodinator, for their assistance with this research. The authors also thank the Hewlett Foundation for providing the funding for this research.

[2] The primary source of statistics was U.S. EPA Enforcement ADR Program, "Status Report on the Use of Alternative Dispute Resolution in Environmental Protection Agency Enforcement and Site-Related Actions"(December, 1999).

- EPA ADR specialists (18 out of 20, or ninety percent were interviewed);
- potentially responsible parties (PRPs) to primarily Superfund cases (we interviewed a stratified random sample of 25);
- third party neutrals used to convene, facilitate or mediate the cases (we interviewed 22 for a response rate of sixty-nine percent[4]); and
- agency enforcement attorneys who had participated in an EPA enforcement ADR process (61, or seventy-eight percent were interviewed).

The Literature

The essence of environmental dispute resolution (EDR)[5] is face-to-face meetings of parties who have a stake in the outcome of the matter to reach consensus on a solution which best satisfies their interests. Based on the extant literature, O'Leary *et al.* have identified five principle elements of EDR: 1) the parties agree to participate in the process, 2) the parties or their representatives directly participate, 3) a third party mediator helps the parties reach agreement, but has no authority to impose a solution, 4) the parties must be able to agree on the outcome, and 5) any participant may withdraw and seek a resolution elsewhere (O'Leary *et al.*, 1999).

The literature is ripe with normative pleas to increase the role of the lay public and interested stakeholders in the resolution of environmental disputes. One author, for example, argues that such participation in the resolution of water conflicts in the western United States is a fundamental tenet of our democratic government (Waller, 1995). Other literature focuses on problems that might be more amicably and more efficiently resolved through ADR. For instance, one author argues that the use of alternative dispute resolution techniques could greatly improve the management of Superfund cleanups (Whitman, 1993). A study of intergovernmental conflict stemming from state law regulating solid waste in North Carolina concludes that state and local governments may be able to positively resolve such disputes by adopting a problem-solving stance and searching for win-win results (Jenks, 1994). Finally, the Environmental Protection Agency's (EPA) Office of Site Remediation writes in one of its publications that there are several benefits of ADR in its environmental enforcement actions: lower transaction costs, a focus on problem solving (as opposed to positioning), the generation of settlement options that are more likely to be tailored to stakeholders' needs, and the saving of time (U.S. Environmental Protection Agency, 1995).

Describing ADR as a more effective problem-solving or policy-making method than alternatives such as litigation or traditional rule-making procedures is a common theme. There are, however, insufficient analyses of environmental dispute resolution efforts, generally, and no comprehensive studies of EDR used in enforcement actions at

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[3] The primary sources of archival records were U.S. EPA Office of Site Remediation records and Lexis consent decree files.

[4] The EPA sent us a list of 45 third-party neutrals. From this list, seven stated they had never served as a neutral on an EPA case, five could not be located due to a change of address, three declined, and seven could not be reached.)

[5] EDR and ADR are used interchangeably in this paper.

the U.S. Environmental Protection Agency. Examples of solid, yet limited, existing analysis that do not include EPA enforcement ADR are deHaven-Smith and Wodraska (1996) who examined consensus-building in integrated resources planning within the Metropolitan Water District of Southern California; Kerwin and Langbein (1995) who analyzed negotiated rulemaking at EPA; Fiorino (1988) who looked at regulatory negotiation as a policy process at the EPA; Blackburn (1988) who examined environmental mediation as an alternative to litigation; and Perritt (1986) who analyzed the use of ADR techniques in negotiated rulemaking. There are also public administration scholars who have examined generic conflict resolution techniques (see, e.g., Lan, 1997). Thus, while the literature has generally advocated EDR as a public management response to the problem of environmental conflict, broad studies assessing the lessons from these programs are scarce.

EDR at the EPA

The EPA has experimented with a wide spectrum of EDR applications. To better understand how enforcement ADR fits in this picture, we first review the full spectrum. EPA ADR applications can be understood as differing along two dimensions: their scope and their objectives. One dimension considers whether the scope of the dispute is "site-specific" (i.e. limited to a particular resource, location or situation) or whether it is "policy level" (i.e. it applies more generally to a class of resources, locations or situations). The other dimension analyzes whether the objective is a formal decision (parties have the legal and political authority to make and implement the decision) or a recommendation to decision makers. Figure 1 represents this two-dimensional continuum. Figure 2 classifies EPA's use of EDR in this continuum.

Figure 1 - Classifying EDR Applications

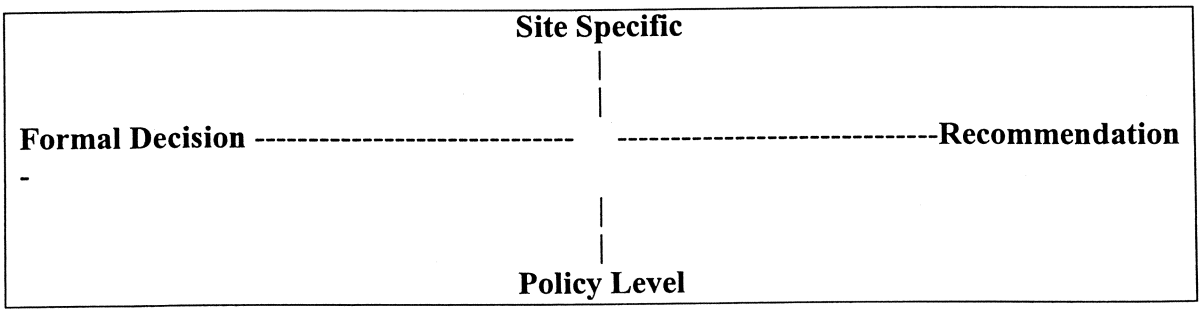
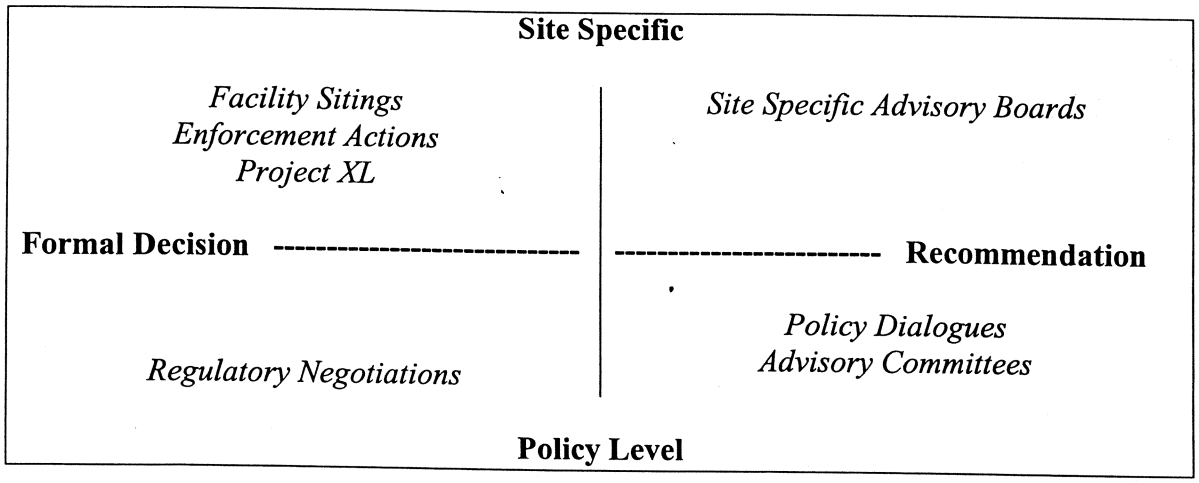


Figure 2 - EDR Applications at EPA



EPA now has the most extensive and systematic approach to EDR of any federal agency. Several different offices in headquarters coordinate dispute resolution assistance for the agency. In October 1998, EPA created the position of "Dispute Resolution Specialist." In November of 1999, the establishment of a Conflict Prevention and Resolution Center was announced. The Center is now part of the Agency's ADR Law Office that serves as EPA's national ADR policy and coordination office. In addition, the Agency has an Office of Enforcement and Compliance Monitoring ADR program, as well as ombudsman programs in several regional and headquarter offices. In striving for a "simple and easily accessible process," the regional offices are designated as the primary point of contact for parties seeking dispute resolution (Cooke, 1999).

EPA has been working to develop and implement a comprehensive EDR policy for site-specific enforcement actions[6] (Environmental Protection Agency 1995). In 1985, the EPA's Region V volunteered to establish an Alternative Dispute Resolution (ADR) Pilot Project for Superfund cases. From the pilot, agency staff identified eight factors, ordered roughly by importance, for evaluating the mediation potential of a Superfund case: EPA willingness to litigate, identification of issues suited to mediation, timing considerations, nature of the parties to the dispute, number of parties and participation by non-parties, amount in dispute, and the ability of the parties to share mediation costs (Environmental Protection Agency, 1995: 346). In 1987, EPA deemed the pilot a success and began to use ADR in more cases throughout its regions. The 1987 "Final Guidance on Use of Alternative Dispute Resolution in EPA Enforcement Cases" allowed the use of mediation, arbitration, fact-finding, and mini-trials (Cooke 1999).

In 1990, Abbott found that although ADR held great promise for Superfund enforcements, it had slim chances of being successfully utilized (Abbot, 1990). Due to the reluctance of EPA officials to use the process and the Potentially Responsible Parties'

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[6] Enforcement actions eligible for EDR include those filed pursuant to the Comprehensive Environmental Recovery Compensation and Liability Act (CERCLA, also know as Superfund), the Resource Conservation Recovery Act (RCRA), the Clean Water Act and the Oil Pollution Act.

(PRPs') "fundamental distrust of the settlement process," Abbott doubted that Superfund EDR would live up to its promise (Abbot, 1990: 64). She documented several cases of successful EDR, including one mediation, four arbitrations and one mini-trial (Abbot, 1990: 48-52). She found, however, theoretical and pragmatic problems with the process because "public issues are resolved in part by private parties," and "the EPA's ability to write contribution protection into consent decrees with settling PRPs may present serious constitutional questions as to the rights of non-settling PRPs" (Abbot: 1990, 64).

Charla and Parry found that using EDR at Superfund sites had both positive and negative implications for PRPs (Charla and Parry, 1991). At many sites, PRPs had formed steering committees to discuss and resolve problems such as negotiating consent decrees or administrative orders with the government, performance or supervision of a surface removal, and cost allocation among the parties. Innovative committees had employed a third party neutral to perform binding or non-binding arbitration to resolve allocation and other issues (Charla and Parry, 1991: 92-93). According to Charla and Parry:

> When properly utilized, a number of ADR techniques provide good results at sites, including equitable allocations of liability, competent development of facts, facilitation and mediation services, and savings of time and transaction costs. Negatives can be high expenses, protracted delays, work product of questionable quality and failure to accomplish outcomes intended by the steering committee (1991: 97).

Consequently, the authors determined it was important for PRP steering committees to carefully weigh their needs and select the proper ADR technique.

In the mid-1990's, ADR gained more widespread acceptance and application in enforcement cases. The Office of Enforcement issued a policy memorandum in 1993 to its regional offices encouraging the use of ADR, particularly arbitration, for recovery claims where the amounts of pollutants contributed by each party were generally small (known as "de minimus settlements") (Diamond, 1993). By 1995 when the agency issued a comprehensive policy for ADR in enforcement actions, it had used ADR in over 50 enforcement-related disputes ranging from two-party Clean Water Act cases to Superfund disputes involving up to 1200 parties[7] (Environmental Protection Agency, 1995). EPA developed an Allocation Pilot Program in 1995 under the Superfund Administrative Reforms. The Allocation Pilot used consultants to assign shares of responsibility to PRPs while EPA assumed responsibility for the "orphan share" (i.e. shares of parties that are defunct, insolvent, or missing) (Koyasako, 1998). According to Hyatt (1995) ADR became "virtually the norm at multiparty Superfund sites [among private party PRPs] for resolving contribution claims"(Hyatt 1995).

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[7] EPA had also established an ADR Headquarters Team and ADR specialists in each Region to provide staff support and training. In addition, a contract with RESOLVE made ADR services readily available. For additional insights and research on Superfund ADR, see Gilbert (1989).

Comparing Theory and Practice

Implementing an ADR policy for enforcement cases at the EPA has not been an easy task, and as such provides an interesting window into the use of conflict resolution techniques to resolve environmental (and other) disputes. While the literature on EDR is growing, few of the recommendations and assertions found in the literature have been tested or compared with cases outside those described in the article in which they were originally reported. The following sections compare the reality of the EPA's enforcement ADR program with the theories found in the literature.

Why Do Parties to an Environmental Dispute Choose Alternative Dispute Resolution?

A fundamental issue in the literature concerns the incentives of parties to a dispute to use a dispute resolution process. There is debate about whether or not mediation, for example, is more cost effective and faster than litigation. There are many assertions that ADR is more cost-effective and speedier than litigation both for the government and for the private sector (Anderson, 1985; Ryan, 1997). On the other hand, others caution that while litigation is more expensive, mediation should not be seen as a free ride. In extremely complex cases, the process of mediation takes time and thus money (Dean, 1998). Others, however, have disputed the view that mediation is less costly or faster at all, claiming that "traditional litigation is actually less costly and time-consuming because clear rules and precedents are established which preclude later litigation" (Abbot, 1990, citing Brunet). Similarly, a Rand Corporation Study of ADR in federal district court cases found "no strong statistical evidence that the mediation or neutral evaluation programs . . . significantly affected time to disposition, litigation costs or attorney views of fairness. . ." (Kakalik, 1997). Yet another view is that private parties make the decision to mediate based on an overall cost-benefit analysis predicting the chance of overall loss or gain from going to court plus the transaction costs of litigation or mediation (Steenland, 1996).

Our research supports several streams of this literature. Concerning ADR processes in enforcement actions, there is a perception among PRPs that ADR saves money in transaction costs and resolves the dispute more quickly than litigation. There also is a perception that they "get a better deal" through ADR than they would through traditional Superfund litigation. PRPs uniformly reported feeling that they have more control over their case when they use ADR. Finally, PRPs reported that ADR helped them control their risks and gave them a chance to educate the EPA.

The preference for ADR over litigation could be associated with the particularly high litigation costs of CERCLA and the low possibility of a successful court outcome for PRPs. However, another study of a range of environmental mediation efforts found that participants generally found one of the central contributions of mediation was a reduction in time, delay or cost (even when mediation was ultimately unsuccessful) (Buckle 1986).

While the PRPs seem to have a set of cost-benefit reasons for wanting to mediate, the incentives for the EPA are much more ambiguous. One of the more interesting assertions about whether or not a party is willing to mediate relates to power differences. In particular, some have theorized that when there are power differences, it is less likely that parties will mediate – those who have more power simply have no incentive to go to the table, (Abbot, 1990, citing Riesel) while those without power will not want to mediate in a situation where they are at a disadvantage (Amy, 1987; Nader, 1995). The Superfund laws give the EPA broad enforcement authority with standards such that it is very difficult to defeat the EPA in court (Abbot 1990). However, researchers have suggested many reasons that the EPA should have an incentive to mediate, including: saving the legal departments and taxpayers time and money, (Abbot, 1990) meeting Congressional demands for an increased number of clean-ups, (Anderson, 1985), or simply following the Executive Order No. 12778 to attempt settlement and offer ADR prior to litigation.

EPA enforcement attorneys who support enforcement ADR reported preferring the flexibility in crafting a resolution to an enforcement problem that ADR gives them, as opposed to the constraints of litigation. Further, they reported feeling more in control of their case than if they were before a judge. One attorney interviewed, for example, remarked that "throwing a case before a judge" represented the ultimate loss of control, whereas mediation increases the amount of control attorneys and parties have, since resolution only occurs through consensus. Finally, some said they choose ADR because it forces the parties to be civil, as opposed to adversarial.

Conflicting views of EPA's incentives to mediate can be found in the PRP response to the question of EPA "helpfulness" in establishing an ADR process. A little under one-half of the PRPs found EPA moderately or very helpful; however, the other half found the agency very unhelpful. As one respondent put it, "the agency had to be dragged kicking and screaming" to ADR. The fact that our sample consisted of mediated cases is likely to have biased the responses towards the EPA being "helpful." And in fact, interviews with EPA regional ADR specialists and the third-party neutrals who helped mediate Superfund disputes have also indicated ambivalence, if not overall negativity, within the agency about the role of mediation.

Despite the positive comments by EPA enforcement attorneys cited above, concerns among other EPA attorneys are prevalent. Some lawyers reported, "If I can win, why mediate?" Other attorneys reported that there is a perception that using ADR is a sign of a weak case. Still others reported, contrary to the findings reported above, a fear of loss of control over their case once in the ADR process. Some attorneys also think that asking for a mediator will be a sign that they need help as a lawyer/negotiator. Several mediators, as well as PRPs, mentioned that EPA and Department of Justice attorneys were forced into mediation by a judge. Much of this stems, undoubtedly, from traditional law school education where attorneys are taught that to represent their clients zealously they must act in an adversarial fashion. Similarly, one author writing on ADR training sessions notes that EPA staff attorneys regularly question why they should mediate when the agency has "sweeping, unilateral powers of enforcement"(Peterson 1992, 332). It

would seem that despite efforts to promote ADR within the agency, as well as the satisfaction with the program of most EPA enforcement attorneys who were interviewed, there are countervailing pressures that undermine the use of ADR. Again, a possible explanation may be the premier power status that the agency and agency attorneys have under environmental law, particularly the Superfund law.

Another explanation for EPA attorneys' reluctance to mediate may be rooted in past negative publicity about letting polluters off the hook (Anderson, 1985). This would certainly reinforce apprehension about ceding the power to demand a specific outcome. Another way of looking at the issue is that the EPA and the PRP's have not reached the "hurting stalemate" that Kriesberg hypothesizes is a precursor to successful conflict resolution (Kriesberg, 1999). The power is too heavily on the side of the EPA to want to cede any advantage through mediation. Interestingly, while power theory would also hold that the weaker party should not negotiate because mediation simply reinforces the power imbalance, here PRPs seem very willing to come to the table.

What Are the Key Elements Needed for the Successful Resolution of Environmental Conflicts?

The literature concerning the key elements needed for the successful resolution of environmental conflicts is broad and diffuse. For example, it is maintained by O'Connor (1978) who surveyed the opinions of mediators, that certain ingredients contribute to successful environmental mediation (such as the desire to resolve differences, commitment, a neutral third party, understanding of technical issues, compromises, and written agreements). Based on three mediated negotiations at EPA, OSHA, and the Federal Aeronautics Administration ("FAA"), Susskind (1985) concludes that there are five common ingredients to successful mediated negotiations (including environmental regulatory negotiation): "(1) participation by representatives of key stakeholding interests (both able and willing to commit their membership); (2) joint fact-finding; (3) face-to-face negotiation, typically aided by a nonpartisan mediator or facilitator; (4) a focus on inventing the best possible ways of dealing with differences...; and (5) the preparation of a written agreement that all participants agree to help implement."

Schneider and Tohn (1985) concluded from examining two EPA negotiated rulemakings, that written agreements are important to reaching consensus. After examining 81 failed environmental mediations, Buckle and Thomas-Buckle (1986) concluded that while mediators of failed environmental negotiations generally felt that the lack of a written agreement was a sign of failure, participants and observers reported an appreciation of the process and the education derived from the process.

Most authors agree with the conclusion that key parties to an environmental controversy must participate in mediations for them to be successful. Nash & Susskind (1987) make this observation based on case studies of municipal solid waste incineration. Susskind, McMahon, and Rolley (1987) concur. A similar conclusion is made by Gusman (1983), who wrote that interested parties must be involved in the negotiator selection process to the maximum extent that is practical.

Wondolleck, Manring, and Crowfoot (1996) take these views many steps further in their conclusions based on an examination of six case studies and extensive interviews with citizen group participants in ADR processes. The most successful efforts, they found, are those in which citizens have some of the requisite skills—political savvy, negotiation, and communication skills—as well as the energy and resources to devote to the process.

Moore (1996) shifts the locus of the debate from how mediators define success in dispute resolution to how *participants* define such success. Basing her conclusions on two case studies of public land planning disputes in the U.S. and in Australia, Moore describes both conditional and unconditional success. She then explains five dispute resolution success categories evidenced in her research: product-oriented, politically oriented, interest-oriented, responsibility-oriented, and relationship-oriented. A final conclusion of Moore's research is that we need to broaden our definition of successful mediations and negotiations beyond whether a written agreement was finalized or not.

In our research, three key factors stand out as being key to the successful resolution of an environmental enforcement conflict through ADR: control, having key stakeholders at the table, and communication. The issue of control is one that is not well defined in the literature. One of the guiding ideas of ADR is that the participants should have control over designing the process. Some proscribe specific processes of mediation (Folberg, 1988) while others extend this idea of control to direct control over the processes of decision-making (Carpenter and Kennedy, 1985).

In the EPA enforcement attorney's responses to questions about their views of the mediation processes, there is a very close association between the attorney's sense of "loss of control" over the process and the outcomes, and the failure of the mediation to reach an agreement. The concern over control, while strong for PRPs as well, is not as strong as that of the EPA attorneys. The mean enforcement attorney response to the question of "control over the process" for those cases that failed as opposed to those which were successful was 1.97 and 2.88 respectively. (On our Likert scale, 1 is "very satisfied" while 5 is "very dissatisfied.") Similarly, the averages for "control over outcome" were 1.91 and 2.59. Contrasted to this, several attorneys made unprompted comments about giving up control being necessary to reach a resolution. Control was an issue for the PRPs though not as strong. It was significant only as it related to control over the outcome.

In general, both enforcement attorneys and PRPs reported satisfaction with the other elements of the enforcement ADR process, regardless of the outcome. Average scores on the Likert scale were all in the "very satisfied" or "satisfied" range: for "amount of information received" the scores were 1.66 for attorneys and 2.05 for PRPs; for "opportunity to present your side" the scores were 1.43 for attorneys and 1.23 for PRPs; for ability to "amount of participation" the scores were 1.37 for attorneys and 1.39 for PRPs; and for "fairness of the ADR process" the scores were 1.48 for attorneys and 1.23 for PRPs.

From the perspective of the third-party neutrals, having the key stakeholders with decision-making authority at the table was a key element needed for the successful resolution of the conflict. While expressing strong support for the EPA enforcement ADR processes generally, a majority of the third-party neutrals expressed frustration in three key areas concerning who was at the table: a frustration with their inability to get the EPA itself to the table; if EPA was represented at the table, a frustration with the fact that the representative usually had no authority to commit; and a frustration with their inability to get key Department of Justice decision-makers to the table, or to obtain access to them generally. When key stakeholders were not at the table, mediators reported that the conflict generally was not resolved.

There is one last element of the process that was closely associated with the ability to reach a successful outcome and that was the issue of communication and the related issue of feeling that the other party in a dispute learned about or understood your interests. While not heavily emphasized in the environment-related alternative dispute resolution literature, the general literature on ADR and mediation heavily emphasizes communication. Fisher and Ury emphasize the importance of a "discussion stage" of negotiation where "differences in perception, feelings of frustration and anger and difficulties in communication can be acknowledged and addressed"(Fisher and Ury, 1991: 14). Similarly, Katz and Lawyer emphasize the importance of communication in resolving conflicts (Katz and Lawyer, 1983). Carpenter and Kennedy identify "establishing regular and predictable communication" as a key element in their conflict resolution design (Carpenter and Kennedy, 1985).

Improved communication seems to be a particular concern for the PRPs. It is interesting to note that several of the PRPs specifically mention communication problems as a reason for entering mediation. When asked whether "others learned" there was a significant difference in the mean responses for those cases that reached resolution (1.67) and those that failed (2.71). Interestingly, there is also a significant difference in the answer to the question whether "I learned" from the mediation process, with an average of 1.78 for cases successfully resolved and 3.29 for those that failed. While these measures were not significant for the EPA attorneys, the "opportunity to present your side of the dispute" was significantly different for those cases that succeeded compared to those that failed.

Similarly, when asked about the "opportunity to discuss multifaceted issues that are often not addressed in litigation" those PRPs who participated in cases where the conflict was resolved reported an average score of 1.67, while those in unresolved cases reported a score of 2.60. Here the EPA attorneys also showed the importance of discussion, reporting mean differences of 1.82 and 2.53 for resolved versus unresolved mediation cases.

What are the Important Mediator Characteristics Needed for the Successful Resolution of Environmental Conflicts?

In a list of components against which mediators should be evaluated, one author notes that the mediator should be prepared, empathic, problem-solving, have persuasion and presentation skills, be able to minimize distractions, manage the interaction and have a substantive knowledge of the subject area (Honeyman 1990). These areas seem to be reflected to varying degrees throughout the literature. There is a modicum of dissent concerning how knowledgeable about the subject matter of a case the mediator needs to be. In a case study of the Alaska Forest Practices Review Act, for example, the authors found that technical expertise was less necessary than expected, yet even they noted that negotiators whose sole expertise was process should be teamed with ones with more substantive knowledge (Gaffney 1991). Most argue that substantive knowledge is critical in helping parties collect and review relevant information (Louis, 1999; Abbot, 1990). In some circumstances, a mediator needs to act in a purely facilitative role. However, most argue that this may be counterproductive in environmental disputes (Susskind, 1987).

As conventional wisdom suggests, the role of the mediator is important but not decisive. In our study, although there was general satisfaction with the mediators, respondents cited an inconsistency in the quality of mediators in the areas of knowledge about the subject area and ability to control strong-willed attorneys. As such, it indicates that conclusions about a firm grasp of the subject matter and a strong role for the mediator may be warranted. Otherwise, there were no significant differences in the scores of the questions that evaluated the performance of the mediators relative to the success or failure of the dispute. Additionally, the scores were equally high from PRPs as from EPA attorneys. Mediator performance overall received a 1.46 from the PRPs and a 1.57 from EPA attorneys. Not surprisingly, the mediators reported overall that they were either very satisfied or satisfied with their own performance in each of the cases we reviewed.

The EPA contracts out most of its environmental dispute resolution mediator assignments to non-profit or private companies that specialize in environmental mediation, and it is likely that the high ratings for the mediators are a reflection of their professionalism. The lack of difference in scores between resolved and unresolved cases suggests that there are elements beyond the control of mediators that ultimately determine the outcome of the case, as discussed in the previous section.

Does the Number of Parties at the Table Affect the Outcome of a Mediation?

Some have argued that efforts to resolve environmental disputes can only have a limited number of disputants participate if they are to be successful (Carpenter and Kennedy, 1985; Susskind, 1987). Gail Bingham, however, in her landmark study of environmental dispute resolution found no correlation between number of disputants and the successful outcome of a negotiation. In fact, she found that there were slightly more

disputants in cases that were successfully resolved.(Bingham, 1986) Our findings from the study support Bingham. The number of disputants ranges from 2 to 1200 and appears to be evenly distributed across successful and unsuccessful resolution of disputes.

Conclusions

The findings of our study support much of the conventional wisdom of those who work in mediation as well as the theory found in the literature. Why do parties to a dispute choose ADR? The common themes found throughout this research are to save money, to save time, to have greater control over the outcome, to educate, to communicate with the other parties to the dispute, to "get a better deal,"and to preserve flexibility in crafting an agreement. What are the key elements necessary to the successful resolution of environmental conflicts? Undoubtedly there are many, but the three that were most often mentioned in our survey were giving parties control over the process, getting key stakeholders to the table, and communication among the parties. What are the characteristics that are important for mediators to have? They should exhibit basic competence, knowledge of the subject matter, and assertiveness with difficult stakeholders. Finally, does the number of parties to a dispute affect the outcome of ADR efforts? Absolutely not.

Some of the more interesting results of this research relate to the role of the powerful and their willingness to mediate. Opponents of mediation have suggested that mediation locks in power differences to the detriment of the less powerful (Amy, 1987; Nader 1995). While far from conclusive, the results here actually suggest the opposite. Some of those who are powerful in a legal sense, in this case the EPA, are actually reluctant to mediate because it entails giving up a level of control. Those who are less powerful, the PRPs, appear to be far more willing to mediate and save themselves the time and cost of litigation – and through better communication reach a better agreement for themselves.

After nearly two decades of practice, EPA has elevated enforcement ADR from an experiment to a full-fledged program. The results of this study confirm numerous benefits of ADR which have long been purported in theory and espoused by practitioners. However, it also reveals significant concerns among EPA attorneys that will have to be addressed if enforcement ADR is to become a more accepted norm at the agency. EPA recently announced plans to expand ADR throughout the agency.[8] By examining the microcosm of enforcement ADR, we hope that this study will provide EPA with additional insight into the motivations of participants in all types of dispute resolution processes. Other public entities that wish to initiate ADR programs can also gain from these findings. In retrospect, EPA seems to have profited from its iterative approach of beginning with a small pilot program in a single region and assessing the results before expanding to an agency-wide effort. Despite the promising findings of this study, all parties involved in the research, practice, and implementation of ADR programs must bear in mind that this is still a nascent field - one which requires further research on the indicators of ADR success and failure.

[8] Federal Register, vol. 65, no. 49 (March 13, 2000).

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